

REVISED VERSION

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
2 December 2004 (02.12.2004)

PCT

(10) International Publication Number
WO 2004/104295 A1

(51) International Patent Classification⁷: **D21F 1/00**

(21) International Application Number:
PCT/EP2004/050194

(22) International Filing Date: 24 February 2004 (24.02.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/443,474 22 May 2003 (22.05.2003) US
2,440,263 9 September 2003 (09.09.2003) CA

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(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
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TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

Published:

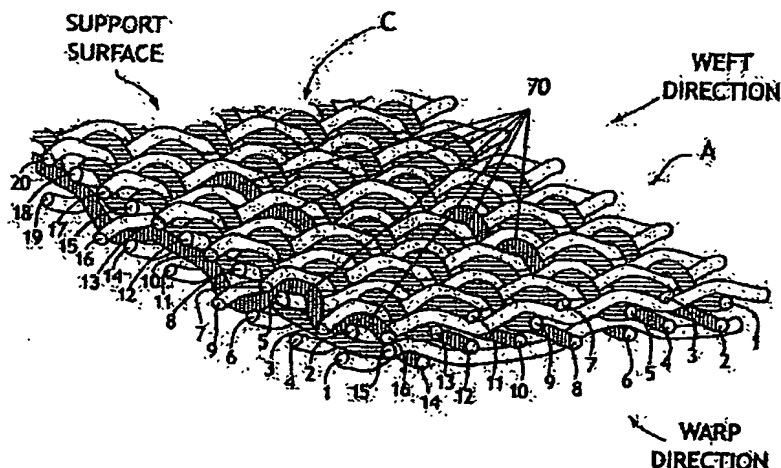
- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the revised international search
report: 20 January 2005

(15) Information about Correction:
see PCT Gazette No. 03/2005 of 20 January 2005, Sec-
tion II

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: WARP BOUND COMPOSITE PAPERMAKING FABRIC



(57) Abstract: A composite papermaking fabric comprising an upper support fabric and a lower contact fabric. The upper fabric is formed of warp yarns, fabric born warp yarns and weft yarns interwoven to provide the upper fabric with a support surface forming a one up, one down weave. The lower fabric is formed of the fabric born warp yarns interwoven with weft yarns in a weave pattern which provides a weft yarn dominated contact surface. Each of the fabric born warp yarns also weaves over at least one of the upper fabric weft yarns during each repeat of the weave pattern forming binding points which bind the upper and lower fabrics together.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/050194

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 D21F1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 D21F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 152 326 A (VOEHRINGER FRITZ) 6 October 1992 (1992-10-06) cited in the application column 4, line 48 - column 5, line 63; figures 2-5 -----	1,12

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

22 November 2004

Date of mailing of the International search report

25. 11. 2004

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INTERNATIONAL SEARCH REPORT

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Application No

PCT/EP2004/050194

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5152326	A	06-10-1992	DE 3938159 A1 23-05-1991
			AT 107979 T 15-07-1994
			DE 59006308 D1 04-08-1994
			EP 0432413 A1 19-06-1991
			ES 2057318 T3 16-10-1994
